Unit 2: Roots and Powers REVIEW
Foundations of Mathematics and Pre-Calculus 10

MULTIPLE CHOICE

1. ANS: D
2. ANS: C
3. ANS: D
4. ANS: D
5. ANS: B
6. ANS: A
7. ANS: B
8. ANS: D
9. ANS: D
10. ANS: B
11. ANS: C
12. ANS: A
13. ANS: B
14. ANS: D
15. ANS: D
16. ANS: C
17. ANS: A
18. ANS: D
19. ANS: D
20. ANS: D
21. ANS: B
22. ANS: A
23. ANS: B
24. ANS: A

SHORT ANSWER

25. ANS:
$11\sqrt{14}$

26. ANS:
$\sqrt{1216}$

27. ANS:
$5\sqrt[5]{9}$

28. ANS:
$\sqrt[6]{\left(\frac{3}{4}\right)^5}$ or $\left(\sqrt[6]{\frac{3}{4}}\right)^5$

29. ANS:

$\frac{9}{4}$

PROBLEM

30. ANS:

Tanisha made an error in the first line when she wrote the square root symbol ($\sqrt{\ }$) instead of the ($\sqrt[7]{\ }$) symbol. Also, the exponent outside the bracket should have been 2, not 7. (The numerator of a fractional exponent represents the index of the radical and the denominator represents the exponent of the power.)

A correct solution:

$$\left(\frac{5}{4}\right)^{\frac{2}{7}} = \left(\sqrt[7]{\frac{5}{4}}\right)^2$$

$$= (1.0323\ldots)^2$$

$$= 1.0658\ldots$$